

**STATE OF NEW MEXICO
BEFORE THE SECRETARY OF ENVIRONMENT**



IN THE MATTER OF REQUEST FOR A CLASS
3 PERMIT MODIFICATION FOR CORRECTIVE
MEASURES FOR THE MIXED WASTE LANDFILL No. HWB 04-11(M)
SANDIA NATIONAL LABORATORIES
BERNALILLO COUNTY, NEW MEXICO
EPA ID NO. NM5890110518

FINAL ORDER

This matter comes before the Secretary of Environment following a hearing before the Hearing Officer on December 2-3 and 8-9, 2004 in Albuquerque, New Mexico. Sandia Corporation and the Department of Energy ("Sandia") seek a RCRA permit modification for Sandia National Laboratories ("SNL") pursuant to the New Mexico Hazardous Waste Act, NMSA 1978 Section 74-4-1 et seq., and the New Mexico Hazardous Waste Management Regulations (20.4.1 NMAC). The proposed modification would incorporate into the RCRA permit requirements for corrective action for SNL's Mixed Waste Landfill (MWL or landfill). The New Mexico Environment Department Hazardous Waste Bureau ("NMED") supports the approval of the proposed modification with the selection of a different remedy than that chosen by Sandia.

Having considered the administrative record in its entirety, including the Hearing Officer's Report; and being otherwise fully advised regarding this matter;

THE SECRETARY HEREBY ADOPTS THE HEARING OFFICER'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW (as corrected by interlineated substitute pages) WITH CHANGES ONLY TO THE FOLLOWING:

2. The Public Notice announced the availability of the Draft Permit for public review; a 90-day period for public comment on the draft; the setting of a public

hearing on the Draft Permit beginning December 2, 2004 in Albuquerque, New Mexico; the procedures for public participation, participation as a party and providing technical testimony. NMED Exhibit 1.

15. The landfill is SWMU 76 at SNL, and regulated under 40 CFR Section 264.101 (incorporated by 20.1.4.500 NMAC) TR 968-69; AR 04-077.

20. Most of 40 CFR Part 264 does not apply to the landfill as it is not included in any Part B permit, and 40 CFR Part 265 does not apply to the landfill as it is not an interim status facility in SNL's Part A permit application. TR 969.

23. NMED proposes to modify Module IV of the permit to: a) incorporate by reference the CMS Report dated May 2003 prepared by Sandia; b) select a vegetative soil cover with bio-intrusion barrier as the remedy for the landfill; c) require a Corrective Measures Implementation ("CMI") Plan for the landfill that incorporates the final remedy and provides implementation schedules, that Sandia must submit to NMED within 180 days of final remedy selection; d) require Sandia to submit progress reports during implementation of the remedy; e) require Sandia to submit a CMI Report for the landfill to NMED for approval within 180 days after implementation of the remedy is complete; and f) require that Sandia submit a long-term monitoring and maintenance plan to NMED for approval. NMED Exhibit 3.

60. The highest tritium flux (flow of tritiated water vapor off surface soils into the atmosphere) occurred at the east boundary of the classified area. TR 55-56, 953. Sandia estimated total tritium activity released from the landfill during 1993 to be 0.294 curies (which decreased to 0.09 curies per year in 2003). TR 954.

86. Sandia subsequently closed the ISS and moved the drums off-site. As part of the closure process, Sandia analyzed risk presented by the ISS, which predicted radiological risk significantly below background levels in Albuquerque. TR 82-83.

120. For the future excavation scenario (Alternative V.e, 39 years in the future), the total dose equivalent was exceeded for a worker excavating the landfill. In NMED's opinion, although the risk assessment could have used more realistic assumptions, it is clear that excavation of the landfill in the near-term could pose substantial risk to excavation workers. TR 1041-43.

169. A bio-intrusion barrier will discourage small animals (such as mice, prairie dogs, burrowing owls) from burrowing through the cover and coming into contact with waste and contaminated soil, and from transporting wastes and contaminated soil in the landfill to the surface. A bio-barrier will not stop insects (such as ants) from burrowing into the ground, and will not prevent deep-rooted plants from penetrating the cover. Any animals or plants living on the landfill will be exposed to low levels of tritium and radon, which will penetrate a bio-barrier. TR 1070.

U. Sandia should develop a comprehensive fate and transport model for the landfill, to be used in evaluating future options, triggers, monitoring and contingencies.

IT IS THEREFORE ORDERED:

Sandia's application for RCRA permit modification is hereby granted as proposed (NMED Exhibit 2), subject to the following changes and conditions:

1. The remedy shall be a vegetative cover with bio-intrusion barrier (Alternative III.c in Sandia's Corrective Measures Study, dated May 2003);
2. As part of the Corrective Measures Implementation Plan that incorporates the final remedy (described in the draft permit modification in Paragraph V.3), Sandia shall additionally include the following:
 - a. a comprehensive fate and transport model that studies and predicts future movement of contaminants in the landfill and whether they will eventually move further down the vadose zone and/or to groundwater;
 - b. triggers for future action, that identify and detail specific monitoring results that will require additional testing or the implementation of an additional or different remedy.
3. NMED and Sandia shall provide a convenient method for the public to review Sandia's Corrective Measures Implementation Plan, Corrective Measures Implementation Report, progress reports, long-term monitoring and maintenance plan, and any other major documents developed by NMED or Sandia for the MWL ("the documents"), including but not limited to, posting the documents on a publicly-accessible website.
4. NMED and Sandia shall provide a method and schedule that allows interested members of the public to review and comment on the documents, and NMED shall review, consider and respond to these public comments prior to approving any of these documents (with the exception of any documents, such as progress reports, that NMED does not approve in the normal course of permit review and oversight).

5. Sandia shall prepare a report every 5 years, re-evaluating the feasibility of excavation and analyzing the continued effectiveness of the selected remedy. The report shall include a review of the documents, monitoring reports and any other pertinent data, and anything additional required by NMED. In each 5-year report, Sandia shall update the fate and transport model for the site with current data, and re-evaluate any likelihood of contaminants reaching groundwater. Additionally, the report shall detail all efforts to ensure any future releases or movement of contaminants are detected and addressed well before any effect on groundwater or increased risk to public health or the environment. Sandia shall make the report and supporting information readily available to the public, before it is approved by NMED. NMED shall provide a process whereby members of the public may comment on the report and its conclusions, and shall respond to those comments in its final approval of the report.

6. The Hearing Officer is granted until April 20, 2005 to submit her Report and Proposed Findings of Fact, Conclusions of Law and Proposed Order.



RON CURRY
Secretary, Environment Department